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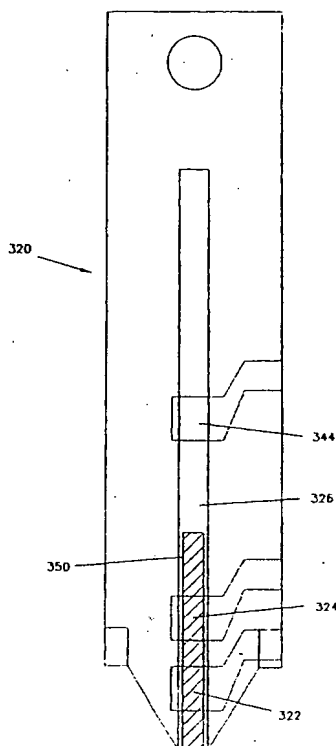
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(54) Title: SMALL VOLUME *IN VITRO* ANALYTE SENSOR AND RELATED METHODS



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(57) Abstract: A small volume sensor, and methods of making, for determining the concentration of an analyte, such as glucose or lactate, in a biological fluid, such as blood or serum, using techniques such as coulometry, amperometry, and potentiometry. The sensor includes a working electrode and a counter electrode, and can include an insertion monitoring trace to determine correct positioning of the sensor in a connector. In one embodiment, the sensor determines the concentration of the analyte by discharging an amount of charge into the sample, determining the time needed to discharge the charge, and determining the current used to electrolyze a portion of the analyte using the amount of charge and the amount of time.